

Abstract

Wildfires have always been a source of devastation throughout California. With the persistent drought, wildfires in Santa Barbara County pose an extreme threat. Currently, residents of Santa Barbara County do not have one specific location to view available live information and data regarding both current and past wildfires. Instead, residents must find and view this information in a number of different locations, whether it be via social media, local news stations, or intermittently produced maps by the fire department. The purpose of this applied thesis is to create a well-designed web map mashup by which residents of Santa Barbara County can view spatial data and emergency information published by different emergency response agencies in one area.

By using geographic information systems, a web map mashup created based on weather conditions, current fire burn areas, evacuation warnings, fire suppression facilities, and local fire department social media feeds inform residents of Santa Barbara County on what is happening as wildfires burn throughout the County. Creating a web map using available data from resources such as Santa Barbara County Fire, CAL FIRE, Waze, and GeoMAC allows residents to monitor evacuation potential, fire size, and emergency updates throughout the county during the event of a wildfire. Developing hypothetical user profiles to ensure efficient user experience design, using ArcGIS Online, a web mapping application was produced to bridge the gap between emergency response institutions and the general public, creating a resource for the public to consult during wildfires. By surveying twenty-five people, all with different professional backgrounds and levels of GIS experience, it was determined the overall webpage, and mapping application provided users with a positive experience that could be beneficial during the event of a wildfire.